

## INSTRUCTION MANUAL

Alarm device

# ACA-1N

ACA-1N/E/01  
December 1994  
Subject to modification

### 1. General



The ACA-1N is an alarm device with a single alarm input, allowing connection of signallers like a horn, a flashing light, HBA and a telephone selector contact. Setting an alarm delay and suppression time is possible as well as continuous monitoring of charge and discharge current. Every 24 hours the battery capacity is checked and an alarm is released at capacity drop below a set value.

### 2. Mounting

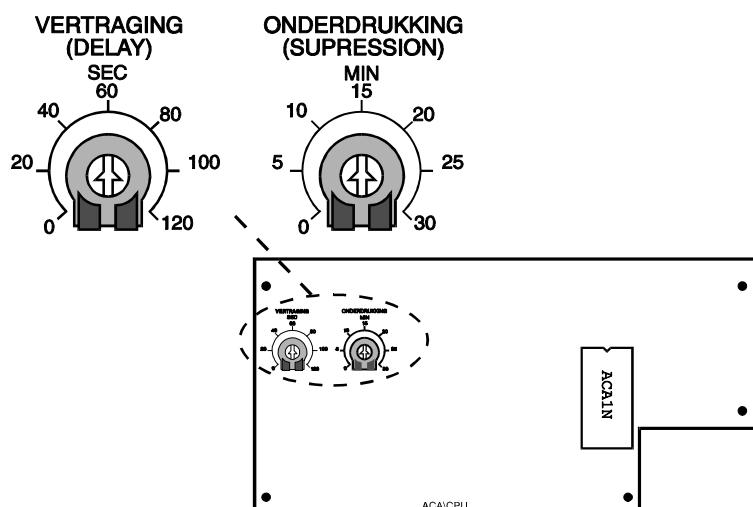
The ACA-1N is mounted to the wall by 4 screws. Ensure that no moisture can penetrate through the screws. The cabling must be entered through the couplings and should be kitted properly.

### 3. Initial operation

Before starting up the ACA-1N, the positive connector of the battery should be placed (See [8.Wiring diagram](#)). The jumper on the bottom PCB makes it possible to set the alarm at alternately horn and flashing light (position ) or at continuous horn alarm (position ).

Also the alarm delay and the alarm suppression must be set by the two setting potentiometers on the cover PCB (see figure). The alarm delay can be set from 0-120 seconds. The alarm suppression from 0-30 minutes. 24 hours after initial operation of the ACA-1N the battery will be subjected to a test. In order to change the moment of the battery check you will have to start up the

battery test by pressing the key for 3 seconds just at the moment the test ought to start.



## 4.Operation

Symbol	Explanation
	<i>HORN OFF:</i> The key switch allows you to switch off the horn or flashing light for good. The HBA and the telephone selector contact remain being activated.
	<i>ALARM SUPPRESSION:</i> an alarm can be suppressed by pressing this key for a while. Suppressed are: horn, flashing light, HBA and telephone selector contact. The suppression time can be set from 0-30 minutes. A battery alarm is switched off until a next battery alarm occurs.
	<i>ALARM TEST:</i> This key can be used to activate alarm signallers such as horn, flashing light, HBA and telephone selector contact. Pressing this key the alarm test is switched on. Pressing the key once more the alarm test is switched off. It is impossible, however, to switch off the alarm in this way.
	<i>BATTERY TEST:</i> Pressing this key for 1.5 minutes the battery condition is tested. A poor condition directly gives cause to an alarm release. Holding the key down for 3 seconds allows you to set the 24-hour-timer at 0 and causes an automatic test after 24 hours. Ensure, therefore, that the test is done at the right moment.

## 5.Alarm signalling

Symbol	Explanation
	<i>HORN OFF:</i> A flashing LED indicates that the horn and flashing light signallers are switched off by the key switch. The HBA and the telephone selector contact remain being activated.
	<i>ALARM SUPPRESSION:</i> A flashing LED indicates suppression of the alarm and time to repair the technical failure. After the set time value an alarm not being removed will return.
	<i>ALARM or ALARM TEST:</i> A flashing LED indicates activation of the alarm test and enables you to check the signallers. A continuous lighting up of the LED indicates that the alarm input is interrupted and releases an alarm. (at once or after an alarm delay time).
	<i>BATTERY PICTURE:</i> <ul style="list-style-type: none"> <li>The normal operation of the charge current is indicated. There are three stages, discharging (red), average (yellow) and charging (green).</li> <li>During the battery test one of the three LEDs blinks. At the same time the battery voltage is measured indicating three stages: insufficient (red), poor (yellow) and good (green). The battery test lasts 1.5 minutes. In case the battery voltage is below average at the time of testing, an alarm will be released (all LED battery indications start blinking).</li> </ul>

## 6.Functioning

Normal operation does not release an alarm. The signallers can be tested by pressing . Pressing the key once more stops the testing procedure.

The battery can be tested by pressing . Holding it down for 3 seconds sets the 24-hour-timer at 0 and ensures an automatic battery test after 24 hours. All alarm situations offer the possibility to switch off horn and flashing light permanently by means of the key switch.

The ACA-1N signals alarm at:

- interruption of the alarm input.
- at lack of power.
- at insufficient battery voltage when testing the battery.

#### Interrupted alarm input:

Made visible by continuous lighting up of the  LED. From that moment onwards the alarm delay time is also started. After elapse of the delay time the signallers are activated. Switching off the signallers immediately interrupts the alarm for a while, which makes it possible to repair the technical failure.

If the input is interrupted more than once during two minutes, also releases an alarm.

During an alarm the battery cannot be tested.

The signallers are supplied by the mains power, which avoids discharge of battery.

#### No mains supply:

Made visible by the combination red LED (discharging) of the battery indication and the  LED that lights up continuously. From then onwards the alarm delay time is also started. Switching off the signallers immediately interrupts the alarm for a while, which makes it possible to repair the technical failure.

The ACA-1N and the signallers are supplied by the battery power. The battery power will last for at least 3 hours (battery empty). After restoring the mains power, it will take about 12 hours to recharge the battery. An empty battery resets the 24-hour-timer.

#### Battery alarm:

Made visible by the three blinking LEDs of the battery indication. A battery alarm will be passed on without delay. To remove the alarm the  key should be pressed (the 24-hour-timer will continue operating without being modified). A poor battery capacity releases an alarm at a next battery test.

## 7.Techical specifications

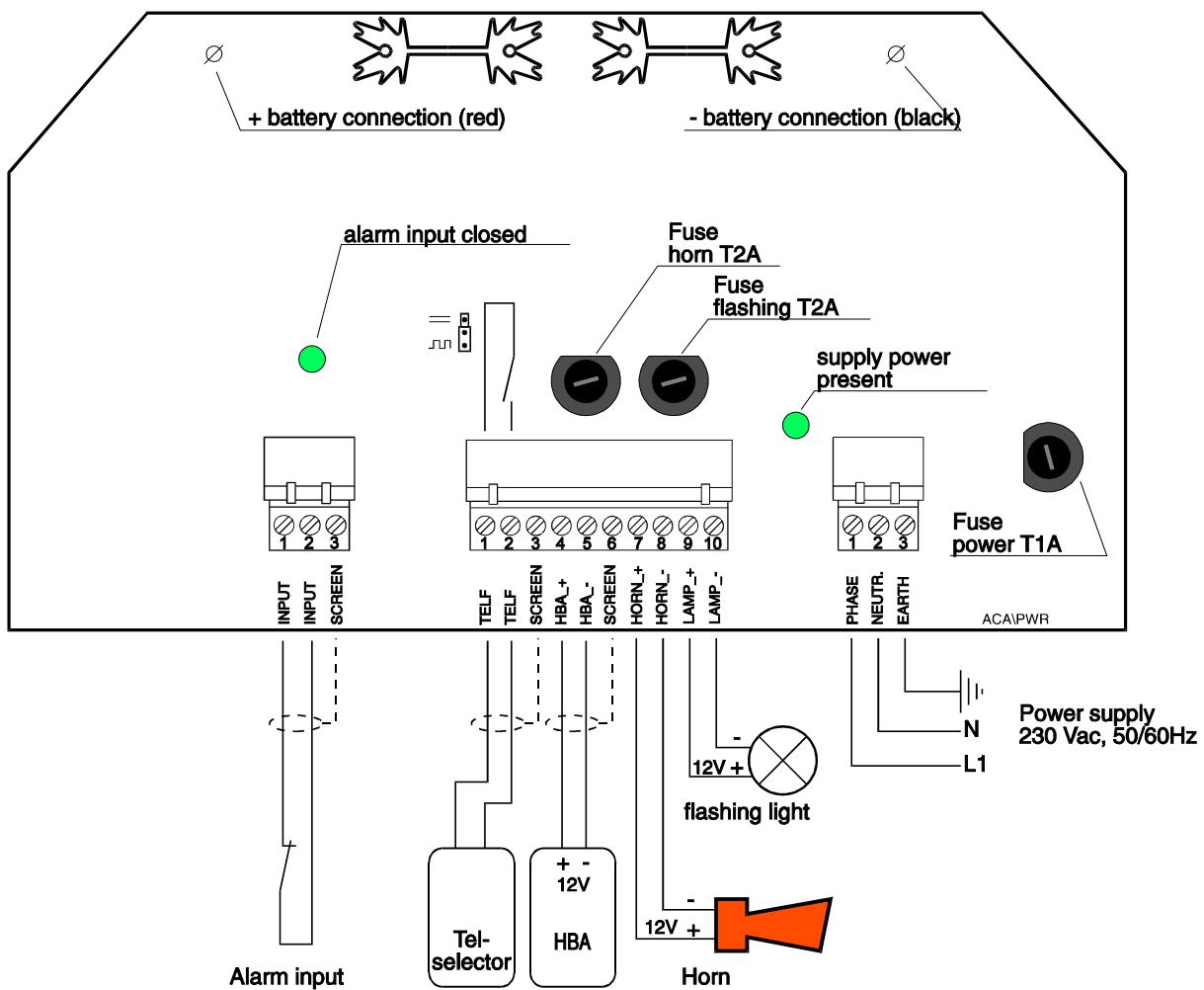
### **Electrical**

Power supply	: 230 Vac $\pm 10\%$ , 50/60 Hz
Power consumption	: 40 VA
Ambient temperature	: -10 °C ... +40 °C
Alarm input	: 24 Vdc / 14 mA circuit breaker, R max. 100 <input type="checkbox"/>
Telephone selector contact	: dead contact breaker, 24 Vac/dc 0,5 A max.
Flashing light	: Voltage 12 Vdc Fuse T2A
Horn	: Voltage 12 Vdc Fuse T2A
HBA	: Voltage 12 Vdc Current 60 mA max.
Battery	: 12 Vdc / 2Ah
Deviation battery test timer	: 17 ppm
Battery voltage indication	: U > 11,5 V ; green U < 11,5 V ; yellow U < 10,5 V ; red
Battery current indication	: I > 1 mA ; green I < 1 mA ; yellow I < -1mA ; red

### **Mechanical**

Dimensions	: 220 x 168 x 110 mm
Encasing	: IP 54
Weight	: about 3 kg

## 8.Wiring diagram



Symbol	Explanation
	HORN / FLASHING LIGHT: This jumper makes it possible to change the alarm setting from horn and flashing light (position  to permanently horn (position ).
	SCREEN: Shielded cable connection.